Page 91, line 20, insert --SEQ. ID. NO.: 14-- before "and";

line 21, insert --SEQ. ID. NO.: 15-- before "were".

In the Claims

~~12.~~ (New) A genomic DNA sequence of human cystic fibrosis transmembrane conductance regulator gene exon 10 including noncoding regions, identified as (SEQ ID NO: 1).

~~13.~~ (New) A cystic fibrosis transgenic mouse model carrying a defined mouse cystic fibrosis conductance regulator exon 10 mutation.

~~14.~~ (New) A method for targeted small fragments homologous replacement of provirus of human immuno-deficiency virus (HIV) using a cocktail of HIV DNA fragments that contain mutations in coding sequences that inactivate the virus.

~~15.~~ (New) A method for gene therapy of a disease associated with a mutated DNA fragment in a subject's target cells, said method comprising steps:

(a) identifying a mutation site within the gene controlling the disease;

(b) obtaining an exogenous type DNA fragment comprising a functional DNA sequence with flanking DNA sequences located upstream and downstream from the functional DNA sequence;

(c) administering to the subject the exogenous DNA fragment

under conditions promoting homologous replacement, said conditions comprising:

(i) the exogenous DNA fragment reaching and entering the subject's target cells;

(ii) locating the flanking DNA sequences of the mutated sequence;

(iii) promoting annealing of the corresponding flanking sequences of the exogenous DNA to the mutated sequence; and

(iv) promoting homologous replacement of the exogenous DNA fragment and the mutated DNA under cellular conditions to produce functional target cells comprising the functional DNA sequence, able to substantially ameliorate the disease's symptoms.

~~17~~. (New) An immortalized mammalian cell line provided with a genetic defect associated with a predetermined disease, the gene being substituted for the wild type fragments by the method of the invention according to claim ~~16~~.